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09/341,085	07/02/1999	CAREL J.L. VAN DRIEL	PHN17.110	4715

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EXAMINER

NGUYEN, THU HA T

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/341,085	VAN DRIEL, CAREL J.L.	
	Examiner	Art Unit	
	Thu Ha T. Nguyen	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims **1, and 3-20** are presented for examination.
2. Claims 1, and 3-7 are currently amended.
3. Claims 8-20 are newly added.

Response to Arguments

4. Applicant's arguments with respect to claims 1, and 3-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

5. Claims 1, 7, 10, and 20 are objected to because of the following informalities:

In claim 1, recited the limitations "said network switch", "the plural terminals", "the access-network-specific switching", "the plural sub-networks". There is lack of antecedent basis for these limitations in this claim.

In claim 7, recited the limitations "said network switch", "the access-network-specific switching", "said access switch". There is lack of antecedent basis for these limitations for this claim.

In claim 10, recited the limitations "said access network", "said network switch", "said access node switch". There is insufficient antecedent basis for these limitations in this claim.

In claim 20 recited the limitations "said network switch", "said access node", "the plural network control elements", "the plural sub-networks", "said node", "said network

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switch", "the plural terminals", "said network switch", "said access network". There is insufficient antecedent basis for these limitations in this claim.

Appropriate correction is required.

Likewise, applicant is required to correct the insufficient antecedent basis for all of the dependent claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hiekali** U.S. Patent No. **5,619,500**, and **Bronstein et al.**, (hereinafter Bronstein) U.S. Patent No. **5,910,954**, further in view of **Hiller et al.**, (hereinafter Hiller) U.S Patent No. **5,426,636**.

8. As to claim 1, **Hiekali** teaches the invention as claimed, including communication system comprising:

a plurality of terminals (figures 2, 4, element 205) that are connected to an access network (figure 2-3, col. 3 lines 3-25); and

said access network having a transmission network, and an access node connecting said transmission network to a non-dedicated network switch further including a plurality of network control elements, said network control elements each including a network control switch and a plurality of channel cluster modules, wherein the channel cluster modules are each arranged for transmitting downstream signals on one, respective carrier frequency (figures 3-5, 8-10, abstract, col. 2 lines 5-33, col. 3 lines 3-59, col. 14 lines 20-60).

However, **Hiekali** does not explicitly teach said access node including an access node switch couple to said network switch, said access node switch controlling all of the access-network-specific switching without said access node switch having to know a carrier frequency allocated to a terminal coupled to a sub-network of the plural sub-networks.

Bronstein teaches wherein said transmission network comprising a plurality of sub-networks correspondingly coupled to said network control elements and to the plural terminals (figures 1, 4-5). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teachings of **Hiekali and Bronstein** to have said transmission network comprising a plurality of sub-networks correspondingly coupled to said network control elements and to the plural terminals because it would have an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

Hiller teaches said access node including an access node switch couple to said network switch, said access node switch controlling all of the access-network-specific switching without said access node switch having to know a carrier frequency allocated to a terminal (abstract, figures 6-7, 11-12, and 23, col. 11, line 23-col. 12, line 44, col. 26, line 27-col. 27, line 7, col. 28, line 53-col. 29, line 14). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hoarty** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

9. As to claim 3, **Hiekali** teaches the invention as claimed, wherein the channel cluster modules comprise at least one downstream channel module (figure 5, col. 3 lines 60-col. 5 lines 45, col. 6 lines 8-col. 7 lines 15).

10. As to claim 4, **Hiekali** teaches the invention as claimed, characterized in that the channel cluster module comprises an upstream channel module (figures 5-6, col. 3 lines 60-col. 5 lines 45, col. 6 lines 8-col. 7 lines 15).

11. As to claim 5, **Hiekali** teaches the invention as claimed, wherein a terminal of the plural terminals comprise signaling means for exchanging network layer control information with said network switch (figure 4, abstract, col. 2 lines 5-33).

12. As to claim 6, **Hiekali** teaches the invention as claimed, wherein said network switch comprises proxy signaling means for deriving network layer control information from session layer and/or transport layer information exchanged between a terminal and said network switch (figure 4, abstract, col. 3 lines 60-col. 5 lines 45).

13. As to claim 7, **Hiekali** teaches the invention as claimed, including access node connectable to a transmission network, and to a non-dedicated network switch, the access node comprising:

a plurality of network control elements wherein a network control elements comprises a network control switch and a plurality of channel cluster modules, in that the channel cluster modules are arranged for transmitting downstream signals on one, respective carrier frequency and are connectable to a terminal (figures 2-4, abstract, col. 1 lines 32-col. 2 lines 33, col. 3 lines 3-59).

However, **Hiekali** does not explicitly teach the transmission network comprises a plurality of sub-networks coupled to the network control elements; an access node switch; and the access node switch controls all of the access-network-specific switching without said access switch having to know a carrier frequency allocated to a terminal coupled to a sub-network of said sub-networks and said access node switch being connectable to said network switch.

Bronstein teaches the transmission network comprises a plurality of sub-networks coupled to the network control elements (figures 1, 4-5). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to

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combine the teachings of **Hiekali and Bronstein** to have the transmission network comprises a plurality of sub-networks coupled to the network control elements because it would have an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

Hiller teaches an access node switch; and the access node switch controls all of the access-network-specific switching without said access switch having to know a carrier frequency allocated to a terminal coupled to a sub-network of said sub-networks and said access node switch being connectable to said network switch (abstract, figures 6-7, 11-12, and 23, col. 11, line 23-col. 12, line 44, col. 26, line 27-col. 27, line 7, col. 28, line 53-col. 29, line 14). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

14. As to claim 8, **Hiller** teaches the invention as claimed in claim 1, wherein said access node switch receives, from said network switch, a packet having a field that identifies a network control element of said network control elements and a carrier frequency of the respective carrier frequencies, part of said field being replaced with an identifier of a route from said network control element to a destination terminal of said packet, said packet being transmitting with its field partly replaced for modulation of

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content of said packet onto the identified carrier frequency (figures 8-10, 14-18). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

15. As to claim 9, **Hiller** teaches the invention as claimed in claim 7, wherein said access node switch receives, from said network switch, a packet having a field that identifies a network control element of said network control elements and a carrier frequency of the respective carrier frequencies, said part of said field being replaced with an identifier of a route from said network control element to a destination terminal of said packet, said packet being transmitting with its field partly replaced for modulation of content of said packet onto the identified carrier frequency (figures 8-10, 14-18). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

16. As to claim 10, **Hiekali** teaches the invention substantially as claimed, including a dedicated access node for connecting a non-dedicated network switch to a

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plurality of sub-networks of a transmission network, the plural sub-networks being respectively connectable to a plurality of terminals, said access node comprising:

a plurality of network control elements, said access node being configured to direct a signal from said network switch to a terminal of the plural terminals intended as a destination (figures 2-4, abstract, col. 1 lines 32-col. 2 lines 33, col. 3 lines 3-59).

However, **Hiekali** does not explicitly teach an access node switch and said network switch is relieved of knowing details of said access network that said network switch would otherwise need for directing said signal to the intended destination terminal.

Hiller teaches an access node switch and said network switch is relieved of knowing details of said access network that said network switch would otherwise need for directing said signal to the intended destination terminal (abstract, figures 6-7, 11-12, and 23, col. 11, line 23-col. 12, line 44, col. 26, line 27-col. 27, line 7, col. 28, line 53-col. 29, line 14). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali** and **Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

17. As to claim 11, **Hiekali** does not teaches a network control switch and a translation unit, said network control switch configured for routing said signal received from said access node switch, via said translation unit, to said terminal, without said

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access node switch having to know a carrier frequency allocated to said terminal.

However, **Hiller** teaches a network control switch and a translation unit, said network control switch configured for routing said signal received from said access node switch, via said translation unit, to said terminal, without said access node switch having to know a carrier frequency allocated to said terminal (abstract, figures 6-7, 11-12, and 23, col. 11, line 23-col. 12, line 44, col. 26, line 27-col. 27, line 7, col. 28, line 53-col. 29, line 14). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

18. As to claim 12, **Hiekali** teaches the invention as claimed in claim 11, wherein each of the plural network control elements includes a network control switch connecting the access node switch to respective ones of the plural terminals, said network control switch for routing being one of the network control switches for said connecting, each of the network control switches being configured for switching said signal onto the respective one of predetermined carrier frequencies (figure 4, col. 3 lines 3-59).

19. As to claim 13, **Hiekali** teaches the invention as claimed in claim 12, wherein a network control element of the plural network control elements further

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includes a plurality of channel cluster modules that connect the network control switch of said network control element to the corresponding said respective ones of the plural terminals, each of the plural channel cluster modules being arranged for transmitting downstream on a respective, single carrier frequency (figure 4, col. 3 lines 3-59).

20. As to claim 14, **Hiekali** teaches the invention as claimed in claim 10, wherein said details are such that said network switch would have to be dedicated if not for said access node being configured to direct said signal from said network switch to said terminal (figure 3, col. 3, line 3-col. 3, line 24).

21. As to claim 15, **Hiekali** teaches the invention as claimed, including a communication system comprising the access node, the transmission network and the plural terminals of claim 10. Therefore, claim 15 is reject the same rational as to claim 10, above.

22. As to claim 16, **Hiekali** does not explicitly teach wherein a terminal of the plural terminals comprises signaling means for exchanging layer control information with said network switch, said control information being exchanged transparently between the signaling terminal and said network switch. However, **Hiller** teaches wherein a terminal of the plural terminals comprises signaling means for exchanging layer control information with said network switch, said control information being exchanged transparently between the signaling terminal and said network switch (abstract, col. 24,

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line 16- col. 25, line 14, col. 40, lines 4-49, col. 56, line 48-col. 57, line 12). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network can perform and handle a transit switching function on a mix of standard and proposed format cells.

23. As to claim 17, **Hiekali** teaches the invention as claimed in claim 15, further comprising an access network that includes said access node and said transmission network, wherein said network switch comprises a proxy signaling function for deriving network layer control information from at least one of session layer and transport layer information exchanged, over said access network, between a terminal of the plural terminals and said network switch (figure 4, abstract, col. 3 lines 60-col. 5 lines 45).

24. As to claim 18, **Hiekali** does not explicitly teach wherein said network switch is connected to an external network, and is configured to set up a connection between said external network and said access node for a call by sending respective set-up messages to said external network and said access node in response to receipt, at said network node, of a request transmitted by one of the plural terminals by a transparent connection to said network switch.

Bronstein teaches wherein said network switch is connected to an external network (figure 1, ATM switch 12 connected to WAN via router 18).

Hiller teaches said network switch is configured to set up a connection for a call by sending respective set-up messages and said access node in response to receipt, at said network node, of a request transmitted by one of the plural terminals by a transparent connection to said network switch (abstract, col. 24, line 16- col. 25, line 14, col. 28, line 63-col. 29, line 14, col. 40, lines 4-49, col. 56, line 48-col. 57, line 12). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali Bronstein and Hiller** because it would have provided a central communication network can perform and handle a transit switching function on a mix of standard and proposed format cells.

25. As to claim 19, **Hiller** teaches the invention as claimed in claim 18, wherein said access node, in response to receiving the respective set-up message, reserves resources for the call and subsequently submits a set-up message downstream toward said one of the plural terminals (col. 26, line 27-col. 29, line 14, col. 58, lines 24-67). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

26. As to claim 20, **Hiekali** teaches the invention as claimed, including a method for configuring a communication system, comprising: providing a transmission

network; providing a non-dedicated network switch; connecting, by means of a dedicated access node, said network switch to the transmission network, said access node including an access node switch and a plurality of network control elements; and said access node being configured to direct a signal from said network switch to a terminal of the plural terminals intended as a destination (figures 3-5, 8-10, abstract, col. 2 lines 5-33, col. 3 lines 3-59, col. 14 lines 20-60). However, **Hiekali** does not explicitly teach connecting, correspondingly, a plurality of sub-networks to the plural network control elements connecting, respectively, a plurality of terminals to the plural sub-networks and such that said network switch is relieved of knowing details of said access network that said network switch would otherwise need for directing said signal to the intended destination terminal.

Bronstein teaches connecting, correspondingly, a plurality of sub-networks to the plural network control elements connecting, respectively, a plurality of terminals to the plural sub-networks (figures 1, 4-5). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Hiekali and Bronstein** to have the transmission network comprises a plurality of sub-networks coupled to the network control elements because it would have an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

Hiller teaches said network switch is relieved of knowing details of said access network that said network switch would otherwise need for directing said signal to the intended destination terminal (abstract, figures 6-7, 11-12, and 23, col. 11, line 23-col.

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12, line 44, col. 26, line 27-col. 27, line 7, col. 28, line 53-col. 29, line 14). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Hiekali and Hiller** because it would have provided a central communication network to manage a large telecommunication networks that provides flexibility for interconnecting large access switches.

Conclusion

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571)

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272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BHARAT BAROT
PRIMARY EXAMINER

Thu Ha Nguyen

August 22, 2005